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Ulf Fildebrandt

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SAP / FINNEGAN, HENDERSON LLP
901 NEW YORK AVENUE, NW
WASHINGTON, DC 20001-4413

EXAMINER

MORRISON, JAY A

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/734,735 | Applicant(s) FILDEBRANDT ET AL. | |
| | Examiner JAY A. MORRISON | Art Unit 2168 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Remarks

1. Claims 1-21 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liston et al. ('Liston' hereinafter) (Publication Number 20050065951) in view of Szirmay-Kalos et al. ('Szirmay-Kalos' hereinafter) ("Development of process visualization systems: an object-oriented approach", Journal of Systems Architecture: the EUROMICRO Journal archive, Volume 46, Issue 3 (January 2000), Pages: 275 - 296, ISSN:1383-7621, Publisher Elsevier North-Holland Inc, New York, NY, USA).

As per claim 1, Liston teaches

A computer program product tangibly embodied in a computer-readable storage medium, comprising instructions operable to cause data processing apparatus to: (see abstract and background)

each controller having at least one associated data structure of data elements, each data structure being associated with exactly one controller, and one or more data mappings, each data mapping specifying a data source for a data element, each data mapping being a context mapping or a model mapping, each context mapping binding the data element to another data element, each model mapping specifying a model and a supply function, the supply function being operable to derive a value of the data element from the model (model-view-controller, paragraph [0009]);

derive one or more data dependency relationships from the data mappings (paragraph [0009] and [0042]);

Liston does not explicitly indicate “receive a specification of two or more controllers” or “each data dependency relationship being directed from a first controller to a second controller and from the second controller to one model, one data dependency relationship being derived whenever there is at least one data mapping between the first controller and the second controller and between the second controller and the model; and visualize the data dependency relationships directed from the first controller to the second controller and from the second controller to the model by displaying a link for each of one or more data dependency relationships, each link showing a direction of data dependency”.

However, Szirmay-Kalos discloses receive a specification of two or more controllers (screen and scheme controllers, section 2.3, third paragraph and figure 4) and each data dependency relationship being directed from a first controller to a second controller and from the second controller to one model, (section 2.4, third paragraph and figure 4) one data dependency relationship being derived whenever there is at least one data mapping between the first controller and the second controller and between the second controller and the model (section 2.4, second and third paragraphs; figure 4); and visualize the data dependency relationships directed from the first controller to the second controller and from the second controller to the model by displaying a link for each of one or more data dependency relationships, each link showing a direction of data dependency (section 2.4, second paragraph and figure 4; section 3.2, first paragraph; figure 10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Liston and Szirmay-Kalos because using the steps of “receive a specification of two or more controllers” or “each data dependency relationship being directed from a first controller to a second controller and from the second controller to one model, one data dependency relationship being derived whenever there is at least one data mapping between the first controller and the second controller and between the second controller and the model; and visualize the data dependency relationships directed from the first controller to the second controller and from the second controller to the model by displaying a link for each of one or more data dependency relationships, each link showing a direction of data dependency” would

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have given those skilled in the art the tools to improve the invention by using relationship tools to derive relationships. This gives the user the advantage of having tools to create such models.

As per claim 2, Liston teaches
the data structure is a tree (paragraph [0052]).

As per claim 3, Liston teaches
the instructions to receive a specification comprise instructions to receive a specification of a component encapsulating the controllers and including the mappings, and wherein the controllers comprise at least one interface controller and at least one view controller (paragraph [0009] and [0042]).

As per claim 4, Liston teaches
the controllers further comprise a configuration controller, a component controller, or a custom controller (paragraph [0009] and [0042]).

As per claim 5,
Liston does not explicitly indicate “receive user input editing a first link; and modify the data dependency relationship specified by the first link in accordance with the user input, the data dependency relationship being modified by modifying the data mappings, wherein the modified data mappings correspond to the user input”.

However, Szirmay-Kalos discloses “receive user input editing a first link; and modify the data dependency relationship specified by the first link in accordance with the user input, the data dependency relationship being modified by modifying the data mappings, wherein the modified data mappings correspond to the user input” (section 3.1, third paragraph, figure 8).

It would have been obvious to one of ordinary skill in the art to combine Liston and Szirmay-Kalos because using the steps of “receive user input editing a first link; and modify the data dependency relationship specified by the first link in accordance with the user input, the data dependency relationship being modified by modifying the data mappings, wherein the modified data mappings correspond to the user input” would have given those skilled in the art the tools to improve the invention by having views of the mappings. This gives the user the advantage of being able to visualize the relationships that exist.

As per claim 6, Liston teaches
the first and second data source each being one of the controllers or models
(paragraph [0009]).

Liston does not explicitly indicate “the first link has a source end, the source end specifying the source of data for the data dependency relationship, and the instructions to receive the user input comprise instructions to: receive user input moving the source end of the first link from a first data source to a second data source”.

However, Szirmay-Kalos discloses “the first link has a source end, the source end specifying the source of data for the data dependency relationship, and the instructions to receive the user input comprise instructions to: receive user input moving the source end of the first link from a first data source to a second data source” (section 3.1, second paragraph, figure 8).

It would have been obvious to one of ordinary skill in the art to combine Liston and Szirmay-Kalos because using the steps of “the first link has a source end, the source end specifying the source of data for the data dependency relationship, and the instructions to receive the user input comprise instructions to: receive user input moving the source end of the first link from a first data source to a second data source” would have given those skilled in the art the tools to improve the invention by having views of the mappings. This gives the user the advantage of being able to visualize the relationships that exist.

As per claim 7,

Liston does not explicitly indicate “the instructions to receive the user input cause the data processing equipment to: receive user input changing the direction of the data dependency relationship for the first link”.

However, Szirmay-Kalos discloses “the instructions to receive the user input cause the data processing equipment to: receive user input changing the direction of the data dependency relationship for the first link” (section 3.1, second paragraph).

It would have been obvious to one of ordinary skill in the art to combine Liston and Szirmay-Kalos because using the steps of “the instructions to receive the user input cause the data processing equipment to: receive user input changing the direction of the data dependency relationship for the first link” would have given those skilled in the art the tools to improve the invention by having views of the mappings. This gives the user the advantage of being able to visualize the relationships that exist.

As per claim 8, Liston teaches
receive user input requesting a display of a detail view of a second link, the second link having a source and a destination (enter input fields, paragraph [0152]);
and respond to the user input by displaying all the data mappings that have the same source and destination as the second link (finds relationset, paragraph [0132]).

As per claim 9, Liston teaches
receive user input to filter the displayed links using a filter (enter input fields, paragraph [0152]);
and display only data dependency relationships satisfying the filter (finds relationset, paragraph [0132]).

As per claim 10, Liston teaches
the filter specifies all data dependency relationships having selected models or controllers as the source (finds relationset, paragraph [0132]).

As per claim 11, Liston teaches

the filter specifies all data dependency relationships having a selected controller as the source or the destination, or having a selected model as the source (finds relationset, paragraph [0132]).

As per claim 12, Liston teaches

receive user input to filter the data mappings using a filter (enter input fields, paragraph [0152]);

derive one or more filtered data dependency relationships from the data mappings satisfying the filter (finds relationset, paragraph [0132]);

and visualize the filtered data dependency relationships (visualize related data, paragraph [0055]).

As per claim 13, Liston teaches

the filter specifies all data mappings having selected models or controllers as the data source (finds relationset, paragraph [0132]).

As per claim 14, Liston teaches

the filter specifies all data mappings having a selected controller or model as the data source, and all data mappings specifying a data source for the selected controller (finds relationset, paragraph [0132]).

As per claim 15, Liston teaches

A system comprising: (see abstract and background)

a processor (paragraph [0012])

each controller having at least one associated data structure of data elements, each data structure being associated with exactly one controller, the component including one or more data mappings, each data mapping specifying a data source for a data element, each data mapping being a context mapping or a model mapping, each context mapping binding the data element to another data element, each model mapping specifying a model and a supply function, the supply function being operable to derive a value of the data element from the model (model-view-controller, paragraph [0009]);

means for deriving one or more data dependency relationships from the data mappings (model-view-controller, paragraph [0009] and [0042]);

Liston does not explicitly indicate means, connected to the processor, for receiving a specification of a component, wherein the component encapsulates two or more controllers (screen and scheme controllers, section 2.3, third paragraph and figure 4) or each data dependency relationship being directed from a first controller to a second controller and from the second controller to one model, one data dependency relationship being derived whenever there is at least one data mapping between the first controller and the second controller and between the second controller and the model (section 2.4, second and third paragraphs; figure 4); and means for visualizing the data

dependency relationships directed from the first controller to the second controller and from the second controller to the model by displaying a link for each of one or more data dependency relationships, each link showing a direction of data dependency (section 2.4, second paragraph and figure 4; section 3.2, first paragraph; figure 10).

However, Szirmay-Kalos discloses “means, connected to the processor, for receiving a specification of a component, wherein the component encapsulates two or more controllers” or “each data dependency relationship being directed from a first controller to a second controller and from the second controller to one model, one data dependency relationship being derived whenever there is at least one data mapping between the first controller and the second controller and between the second controller and the model; and means for visualizing the data dependency relationships directed from the first controller to the second controller and from the second controller to the model by displaying a link for each of one or more data dependency relationships, each link showing a direction of data dependency” ().

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Liston and Szirmay-Kalos because using the steps of “means, connected to the processor, for receiving a specification of a component, wherein the component encapsulates two or more controllers” or “each data dependency relationship being directed from a first controller to a second controller and from the second controller to one model, one data dependency relationship being derived whenever there is at least one data mapping between the first controller and the second controller and between the second controller and the model; and means for

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visualizing the data dependency relationships directed from the first controller to the second controller and from the second controller to the model by displaying a link for each of one or more data dependency relationships, each link showing a direction of data dependency” would have given those skilled in the art the tools to improve the invention by using relationship tools to derive relationships. This gives the user the advantage of having tools to create such models.

As per claim 16,

This claim is rejected on grounds corresponding to the arguments given above for rejected claim 5 and is similarly rejected.

As per claim 17,

This claim is rejected on grounds corresponding to the arguments given above for rejected claim 8 and is similarly rejected.

As per claim 18,

This claim is rejected on grounds corresponding to the arguments given above for rejected claim 15 and is similarly rejected.

As per claim 19,

This claim is rejected on grounds corresponding to the arguments given above for rejected claim 5 and is similarly rejected.

As per claim 20,

This claim is rejected on grounds corresponding to the arguments given above for rejected claim 8 and is similarly rejected.

As per claim 21, Liston teaches

A computer program product tangibly embodied in a computer-readable storage medium, comprising instructions operable to cause data processing apparatus to: (see abstract and background)

each controller having at least one associated data structure of data elements, each data structure being associated with exactly one controller, and one or more data mappings, each data mapping specifying a data source for a data element (model-view-controller, paragraph [0009]);

Liston does not explicitly indicate “receive a specification of two or more controllers” or “display a link for each of one or more data dependency relationships, each data dependency relationship being directed from a first controller to a second controller and from the second controller to one model, each data dependency relationship indicating that there is at least one data mapping between the first controller and the second controller and between the second controller and the model and representing all the data mappings in the same direction between the first controller and the second controller and between the second controller and the model each link showing the direction of data dependency ; receive user input editing a first link; and

modify the data mappings represented by the data dependency relationship specified by the first link in accordance with the user input”.

However, Szirmay-Kalos discloses receive a specification of two or more controllers (screen and scheme controllers, section 2.3, third paragraph and figure 4) or display a link for each of one or more data dependency relationships, each data dependency relationship being directed from a first controller to a second controller and from the second controller to one model, each data dependency relationship indicating that there is at least one data mapping between the first controller and the second controller and between the second controller and the model and representing all the data mappings in the same direction between the first controller and the second controller and between the second controller and the model each link showing the direction of data dependency (section 2.4, second and third paragraphs; figure 4); receive user input editing a first link; and modify the data mappings represented by the data dependency relationship specified by the first link in accordance with the user input (section 2.4, second paragraph and figure 4; section 3.2, first paragraph; figure 10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Liston and Szirmay-Kalos because using the steps of “receive a specification of two or more controllers” or “display a link for each of one or more data dependency relationships, each data dependency relationship being directed from a first controller to a second controller and from the second controller to one model, each data dependency relationship indicating that there is at least one data mapping between the first controller and the second controller and between the second

controller and the model and representing all the data mappings in the same direction between the first controller and the second controller and between the second controller and the model each link showing the direction of data dependency; receive user input editing a first link; and modify the data mappings represented by the data dependency relationship specified by the first link in accordance with the user input” would have given those skilled in the art the tools to improve the invention by using relationship tools to derive relationships. This gives the user the advantage of having tools to create such models.

Response to Arguments

4. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. The prior art made of record, listed on form PTO-892, and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay A. Morrison whose telephone number is (571) 272-7112. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo can be reached on (571) 272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jay Morrison
TC2100

/Tim T. Vo/
Supervisory Patent Examiner, Art
Unit 2168